

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 2, 5, 12, 15 and 18 without prejudice or disclaimer.

Please AMEND claims 1, 3-4, 6-11, 13-14, 16-17, 19, 20, and 22, and ADD new claim 23.

1. (CURRENTLY AMENDED) A collaboration apparatus between information processing systems for allowing a plurality of information processing means including information processing means based on different architectures to collaborate with each other, the apparatus being implemented as an object to be operated singly, and comprising:

collaboration information storage means for storing information on a communication method between the information processing means as collaboration information among the plurality of information processing means;

role object generating means for generating a role ~~objects respectively corresponding to the information processing means that are allowed to collaborate with each other~~ object as an active role with respect to one of two information processing means to be collaborated, and a role object as a passive role with respect to the other; and

relating object generating means for referring to the collaboration information of the collaboration information storage means and generating a relating object ~~for collaboration between the role objects~~ that allows transaction communication to be performed in accordance with a communication method between the two information processing means to be collaborated, thereby allowing a collaboration between the role object as the active role and the role object as the passive role.

2. (CANCELLED)

3. (CURRENTLY AMENDED) A collaboration apparatus between information processing systems according to claim-2 1, wherein the ~~timing information communication method~~ method is selected from a plurality of kinds of communication methods including real communication, delayed batch communication, and batch communication.

4. (CURRENTLY AMENDED) A collaboration apparatus between information processing systems for ~~allowing performing unified management of data managed in duplicate~~ by a plurality of information processing means including information processing means based on different architectures to collaborate with each other, the apparatus being implemented as an object to be operated singly, and comprising:

information identification object generating means for generating an information identification object that determines information to be stored in a storage apparatus of each information processing means;

collaboration information storage means for storing information on a communication method between the information processing means as collaboration information among the plurality of information processing means;

role object generating means ~~for referring to the collaboration information of the collaboration information storage means and generating respective role objects of the information processing means that are allowed to collaborate with each other~~ that generates a role object as an active role with respect to information processing means that is a data transmission origin, and a role object as a passive role with respect to information processing means that is a data transmission destination; and

relating object generating means for referring to the collaboration information of the collaboration information storage means and generating a relating object for transmitting information to be stored in a storage apparatus of each information processing means between the role objects, in accordance with a communication method between the information processing means that is a data transmission origin and the information processing means that is a data transmission destination.

5. (CANCELLED)

6. (CURRENTLY AMENDED) A collaboration apparatus between information processing systems according to claim-5 4, wherein the ~~timing information communication~~ method is selected from a plurality of kinds of communication methods including real communication, delayed batch communication, and batch communication.

7. (CURRENTLY AMENDED) An integrated information processing system including a plurality of information processing means, the plurality of information processing

means including information processing means based on different architectures, the system comprising:

collaboration information storage means for storing information on a communication method between the information processing means as collaboration information among the plurality of information processing means; and

a collaboration apparatus between information processing systems for referring to the collaboration information of the collaboration information storage means and allowing the information processing means to collaborate with each other,

~~the collaboration apparatus between information processing systems including: the~~
apparatus being implemented as an object to be operated singly, and comprising:

role object generating means for generating a role objects respectively corresponding to the information processing means that are allowed to collaborate with each other, object as an active role with respect to one of two information processing means to be collaborated, and a role object as a passive role with respect to the other; and

relating object generating means for referring to the collaboration information of the collaboration information storage means and generating-generates a relating object for collaboration between the role objects that allows transaction communication to be performed in accordance with a communication method between the two information processing means to be collaborated, thereby allowing a collaboration between the role object as the active role and the role object as the passive role.

8. (CURRENTLY AMENDED) An integrated information processing system including a plurality of information processing means, the plurality of information processing means including information processing means based on different architectures, the system comprising:

collaboration information storage means for storing information on a communication method between the information processing means as collaboration information among the plurality of information processing means; and

a collaboration apparatus between information processing systems for referring to the collaboration information of the collaboration information storage means and performing unified management of data managed in duplicate by the information processing means, the apparatus being implemented as an object to be operated singly, and comprising:

information identification object generating means for generating an information identification object that determines information to be stored in a storage apparatus of each

information processing means;

~~collaboration information storage means for storing collaboration information among the plurality of information processing means;~~

~~role object generating means for generating a respective role object as an active role with respect to information processing means that is a data transmission origin, and a role object as a passive role with respect to information processing means that is a data transmission destination objects of the information processing means that are allowed to collaborate with each other; and~~

~~relating object generating means for referring to the collaboration information of the collaboration information storage means and generating a relating object for transmitting information to be stored in a storage apparatus of each information processing means between the role objects in accordance with a communication system between the information processing means that is a data transmission origin and the information processing means that is a data transmission destination.~~

9. (CURRENTLY AMENDED) A computer-readable recording medium storing a collaboration program between information processing systems that allows a computer to execute, as an object to be operated singly, processing of allowing a plurality of information processing means including information processing means based on different architectures to collaborate with each other, the program allowing a computer to execute:

~~processing of generating role objects respectively corresponding to the information processing means that are allowed to collaborate with each other~~ generating a role object as an active role with respect to one of two information processing means to be collaborated, and generating a role object as a passive role with respect to the other; and

~~processing of referring to collaboration information~~ including information on a communication method between the information processing means among the plurality of information processing means and generating a relating object for collaboration between the role objects that allows transaction communication to be performed in accordance with the communication method between the two information processing means to be collaborated.

10. (CURRENTLY AMENDED) A computer-readable recording medium storing a collaboration program between information processing systems that allows a computer to execute, as a perpetuation object to be operated singly, processing of allowing performing unified management of data managed in duplicate by a plurality of information processing

means including information processing means based on different architectures ~~to collaborate with each other~~, the program allowing a computer to execute:

processing of generating an information identification object that determines information to be stored in a storage apparatus of each information processing means;

processing of generating ~~a respective role objects of the information processing means that are allowed to collaborate~~ object as an active role with respect to information processing means that is a data transmission origin, and generating a role object as a passive role with respect to information processing means that is a data transmission destination; and

processing of referring to collaboration information including information on a communication method between the information processing means among the plurality of information processing means and generating a relating object for transmitting information to be stored in a storage apparatus of each information processing means between the role objects in accordance with the communication method between the information processing means that is a data transmission origin, and information processing means that is a data transmission destination.

11. (CURRENTLY AMENDED) A method of collaborating a plurality of information processors based on different architectures, the method being carried out by an object to be operated singly, and comprising:

storing information on a communication method between the information processors as collaboration information among the plurality of information processors;

~~generating role objects respectively corresponding to each of the information processors that are allowed to collaborate with each other~~ a role object as an active role with respect to one of the two information processors to be collaborated, and a role object as a passive role with respect to the other; and

referring to the stored collaboration information and generating a relating object that allows transaction communication to be performed in accordance with the communication method between the two information processing means to be collaborated, thereby allowing a collaboration between the role object as the active role and the role object as the passive role. for collaboration between the role objects.

12. (CANCELLED)

13. (CURRENTLY AMENDED) The method of collaborating according to claim-42

11, wherein the ~~timing information communication method~~ is selected from a plurality of kinds of communication methods including real communication, delayed batch communication, and batch communication.

14. (CURRENTLY AMENDED) A method of ~~collaborating performing unified management of data managed in duplicate by~~ a plurality of information processors based on different architecture, the method being carried out by an object to be operated singly, and comprising:

generating an information identification object that determines information to be stored in each of the plurality of information processors;

~~storing collaboration information among the plurality of information processors;~~

referring to the ~~stored~~ collaboration information including information on a communication method between the information processors and generating respective role objects of the information processor that are allowed to collaborate with each other a role object as an active role with respect to an information processor that is a data transmission origin, and a role object as a passive role with respect to an information processor that is a data transmission destination; and

referring to the stored collaboration information and generating a relating object for transmitting information to be stored in each of the information processors between the role objects, in accordance with a communication method between the information processor that is a data transmission origin and the information processor that is a data transmission destination.

15. (CANCELLED)

16. (CURRENTLY AMENDED) The method ~~of collaborating according to claim-15~~ 14, wherein the ~~timing information communication method~~ is selected from a plurality of kinds of communication methods including real communication, delayed batch communication, and batch communication.

17. (CURRENTLY AMENDED) A computer-readable storage storing a program for controlling a computer to execute, as a perpetuation object to be operated singly, collaborating a plurality of information processors based on different architectures, by:

storing information on a communication method between the information processors as collaboration information among the plurality of information processors;

~~generating role objects respectively corresponding to each of the information processors that are allowed to collaborate with each other~~ a role object as an active role with respect to one of the two information processors to be collaborated, and a role object as a passive role with respect to the other; and

referring to the stored collaboration information and generating a relating object that allows transaction communication to be performed in accordance with the communication method between the two information processing means to be collaborated, thereby allowing a collaboration between the role object as the active role and the role object as the passive role.
~~for collaboration between the role objects.~~

18. (CANCELLED)

19. (CURRENTLY AMENDED) The computer-readable storage ~~method~~ according to claim ~~48~~ 17, wherein the ~~timing information~~ communication method is selected from a plurality of kinds of communication methods including real communication, delayed batch communication, and batch communication.

20. (CURRENTLY AMENDED) A computer-readable storage storing a program for controlling a computer to execute, as a perpetuation object to be operated singly, collaborating a plurality of information processors based on different architectures, by:

generating an information identification object that determines information to be stored in each of the plurality of information processors;

~~storing collaboration information among the plurality of information processors;~~

referring to ~~the stored~~ collaboration information including at least information on a communication method between the information processors and generating ~~respective role objects of the information processor that are allowed to collaborate with each other~~ a role object as an active role with respect to an information processor that is a data transmission origin, and a role object as a passive role with respect to an information processor that is a data transmission destination; and

referring to the stored collaboration information and generating a relating object for transmitting information to be stored in each of the information processors between the role objects, in accordance with a communication method between the information processor that is a data transmission origin and the information processor that is a data transmission destination.

21. (PREVIOUSLY PRESENTED) The computer-readable storage according to claim 20, wherein the collaboration information contains timing information on timing of passing of information between the plurality of information processors.

22. (CURRENTLY AMENDED) The computer-readable storage according to claim 24, ~~20~~, wherein the ~~timing information~~ communication method is selected from a plurality of kinds of communication methods including real communication, delayed batch communication, and batch communication.

23. (NEW) A collaboration apparatus between information processing systems for allowing a plurality of information processing means including information processing means based on different architectures to collaborate with each other, the apparatus being implemented as an object to be operated singly, and comprising:

role object generating means for generating a role object as an active role with respect to one of two information processing means to be collaborated, and a role object as a passive role with respect to the other; and

relating object generating means for referring to collaboration information and generating a relating object that allows transaction communication to be performed in accordance with a communication method between the two information processing means to be collaborated.